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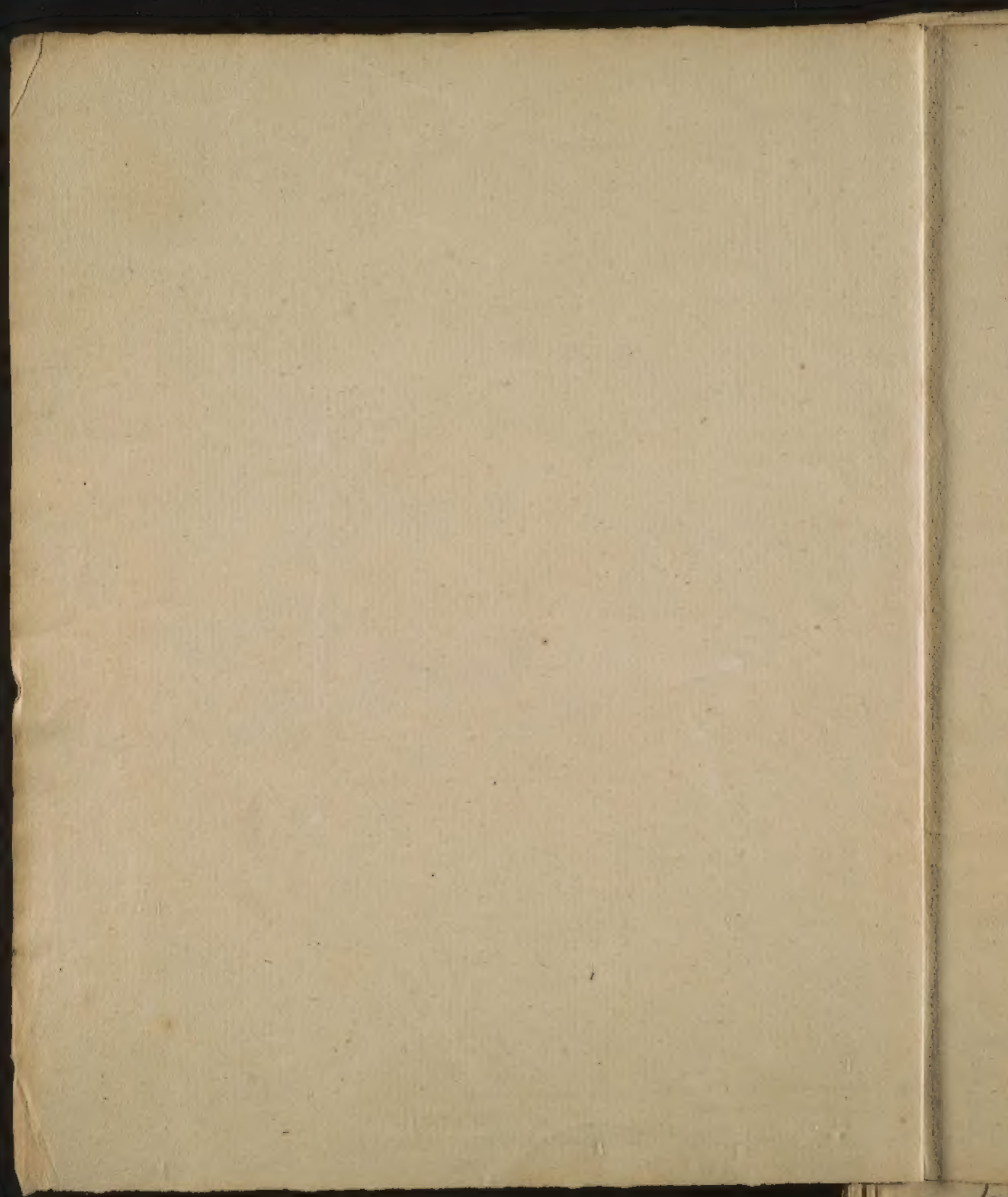
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Hepatic Diseases & Disorders.

place where one  
- up into the lungs by means of one



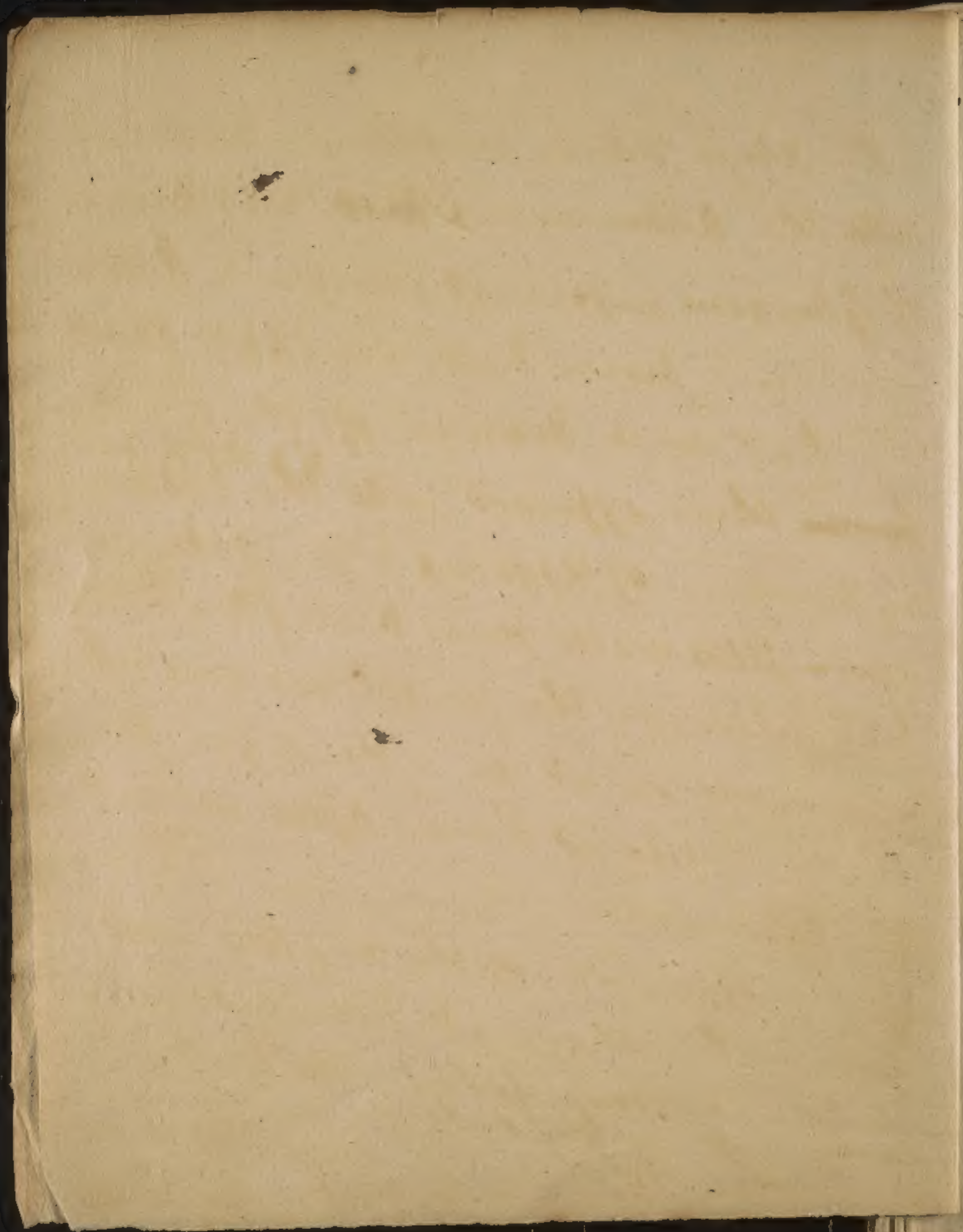


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place where one  
- up into the lungs by means of air





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takes place where matter is discharged  
 into the Abdomen. ~~but~~ Mr. Burns  
 of Glasgow informed me in a letter  
 I received from him in 1807 that  
 he had once drawn off the matter  
 from thus effused into the Abdomen  
 by means of tapping. The Abdomen  
 is again filled with pus. An inflam<sup>n</sup> which  
 took place in the Umbilicus and which  
 suppurated served as a vent for the  
 matter a second time, after which  
 the recovered.

An effusion of the matter into the  
 Stomach, thorax & pericardium is  
 I believe always fatal. ~~The~~ Death in these  
 cases is generally sudden.

Recoveries have been supposed to take  
 place where the matter has been effu-  
 sed into the lungs by means of the



✓ Dr Thomas Clark says he saw  
in the East Indies  
several rivers in which a similar  
outlet took place of the matter con-  
tained in the liver.



double adhesion I have mentioned. The  
 late Dr Redman <sup>of this city</sup> was said to have dis-  
 charged the contents of an abscess in  
 the liver by means of expectoration.  
 I have had two patients viz Dr Pascal  
 of New York, and Miss L. Wilson  
 of this city in whom I supposed the  
 matter from the liver had passed off  
 in the same way. Dr La Roche of an  
 eminent & ingenious French physician  
 of this city who attended Dr Pascalis with  
 me informed me during our visit  
 to him, that he once <sup>attended</sup> ~~opened~~ a pati-  
 ent who <sup>had</sup> discharged, ~~the~~ as he thought  
 the matter of an <sup>hepatic</sup> abscess through his  
 lungs. Some years afterwards this <sup>patient</sup> died.  
 The doctor obtained permission to open  
 him, and to his surprise, found no



& particularly the fact mentioned by Dr Gordon  
of the woman in the Infirmary of Edin<sup>2</sup>  
who expectorated in a hepatitis a pint of  
bile, of which I took notice in our Physi-  
ology



marks of adhesion between the liver  
 diaphragm, and lungs. In this  
 case was the matter absorbed by  
 the ~~the~~ lymphatics and deposited in  
 the lungs, from whence it was ex-  
 pectorated? This I know is the  
 common opinion and several ana-  
 logies formerly mentioned seem to  
 favour it, but I am disposed to  
 believe that the lungs & the liver  
 in <sup>most</sup> ~~probable~~ cases undergo a Sep-  
 arative process at the same time.  
 It is certain the lungs are diseased in  
 the hepatitis - hence the <sup>"dry"</sup> ~~dry~~ cough which  
 always attends it. In favor of the matter  
 being discharged from the liver into



The suppuration  
v while I thus suppose ~~inflammation~~ <sup>inflammation</sup>  
~~from~~ from the lungs to be the most frequent  
cause of a discharge of pus from them I  
admit its taking place likewise from the  
adhesion of the liver to the diaphragm  
and of the diaphragm to the lungs. Dissec-  
tions prove this to be the case.



the lungs, Dr. Clark tells the patients  
 are sometimes suffocated by it. This  
 is possible without any <sup>papae of</sup> ~~matter from~~  
~~the liver~~ <sup>to the</sup> lungs, for  
 how often do we find obscure patients to  
 die of suffocation in pulmonary consumption.  
 Abscess which dissections have shown us  
 to be seated exclusively in the lungs.  
 a <sup>single</sup> discharge of matter from the liver  
 thro the common duct into the duodenum,  
 does not always cure. There is often  
 a reaccumulation of matter and a fresh  
 discharge of it & every two or three  
 weeks, ~~for many~~ <sup>for many</sup> months, ~~together,~~  
 and every two or three months for  
 years together. of this I have seen many  
 instances. In some of them the collection



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Vein the matter discharged from the  
liver whether by nature or art is very sign  
unfavourable.



fatigue ~~and agitation~~ changes in  
the weather, and Agitation of mind.

Black Urine is generally a fatal  
the very sign in an hepatitis. —

Hiccups is unfavourable. Great Sator &  
a moisture upon the skin — an increased

secretion of mucus from the lungs —  
hemorrhage from the nose, or ha-  
emorrhoidal vessels, <sup>eruptions</sup> on any part of the body,  
a copious flow of  
high coloured Urine with a red, or whitish  
sediment are all favourable symptoms.

Dissections show but little signs of  
inflammation in persons who die in the early  
stage of acute hepatitis. After Chronic  
hepatitis the liver is enlarged in its size,  
and resembles a honey comb from its  
internal substance being absorbed. Some-  
times the whole liver except its



✓ a patient in August 1811 & with  
~~Diarrhoea~~ a mixture of Jaundice  
and hepatitis ~~which~~ from whom  
I rec'd a number of small worms  
next the morning after her death.  
Dr Prost mentions worms as one of  
the causes of a disease in the liver  
to be mentioned presently.



~~external covering seems to be consumed.~~

~~The matter found in the ~~to~~ the Ab-  
-scesses is sometimes not only very  
acid, but extremely fetid.~~

I lost V  
but proved next to the other forms of  
hepatic disease.

There is ~~great~~<sup>a</sup> beautiful simplicity  
in the study and practice of medicine  
when they are conducted under the direction  
of ~~proper~~ principles. - I mentioned for-  
-merly that the different grades of bilious  
fever depended upon a difference in the force  
of the remote cause or impression which  
produced them. I repeated the same  
remark in treating upon the different  
forms of intestinal fever. - ~~But~~  
for treating upon <sup>the</sup> hepatic diseases, we  
p. 37



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## RUSH'S REMARKS ON

shall select but two. In the thirty-first letter of Morgagni on the causes and seats of diseases, article the twelfth, he relates the following case. "A priest who laboured under an intestinal flux, discharged various kinds of humours, and these discharges were attended with very severe pains of the bowels, but in them, there appeared neither any thing bloody or purulent. He died on the thirteenth day of the disease. All the intestines being examined, closely on their internal surface, and that more than once, shewed no where any erosion, much less any ulceration, and what seemed more surprising still, they were not without that mucus, as it is called, with which they are naturally smeared over."

Dr. Lind, after describing the habitual flux, concludes with the following remark. "I have seen an hundred cases, where after the whole fluids of the body had been as it were drained by a long continued flux, the discharge at length stopt, and the patient lived in good spirits for some weeks, though reduced to a perfect skeleton. After death, the intestines were found perfectly free from ulceration, and in a sound state."\*

We observe similar instances of the absence of the marks of disease in the salivary, and in the lachrymal glands, after the most copious and even protracted discharges have taken place from each of them.

2. ~~There is a preternatural discharge of a milky fluid from the bowels, which I believe comes in most cases from the liver. It has been called the celiac flux. It is very common in children, in whom it exists with a sound state of the appetite and stomach. It occurs likewise occasionally in adults. Lanzoni~~

\* Diseases of Hot Climates, p. 282.

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*Pathological and Practical Remarks upon certain Morbid Affections of the Liver. By BENJAMIN RUSH, M. D. Professor of Medicine in the University of Pennsylvania.*

IN contemplating the use which I have ascribed to the LIVER in the third volume of the Medical Museum, I have been led to the following application of it to pathology and the practice of physic.

It has been common to suppose that inflammation, obstruction, ulcer, hepatalgia, schirrus, tubercles and gall stones constitute all the morbid states of the liver. But there is good reason to believe it may be affected with diseases without any visible disorganization of its structure, and even with appearances after death, of its being in a sound state. I shall briefly mention those diseases and the proofs of their existence.

V ~~There is a preternatural secretion and excretion of thin and bitter yellow bile.~~ This is common in hot climates, and in warm weather in climates alternately hot and cold. It is attended with diarrhœa, sickness, want of appetite, sometimes a vomiting in the morning, and when this is not the case, with feverishness, a clammy mouth, a burning in the eyes and hands, and a sallow complexion. That a preternatural secretion and excretion of bile may take place without any obvious morbid affection of the liver, I infer from the examination of the body of a lady who died with this symptom in an excessive degree, in the month of August 1805, under the care of Dr. Physick and myself. The result of this dissection did not surprise me. The same absence of the signs of disease, has been noticed in the bowels after both acute and chronic discharges from them, originating in preternatural action of their muscular fibres. From among many records of this kind I

*turn back to p 39.*



instances of <sup>dyspepsia</sup> 37 force of remotion &  
shall meet with the same ~~character~~ <sup>force</sup> ~~producing~~  
existing cause producing the same difference  
in the grade of disease. We have described  
the two highest grade of disease in the  
liver viz: the Acute & Chronic hepatitis.  
A less force of the causes which induce  
both, produce all the diseases which we  
are now about to mention. The next  
of them in order is

II a putrefaction of secretion and excretion  
of thin and bitter bile. - V

The causes of this disease are the  
same as those which produce acute &  
chronic inflammation: acting with less force upon  
the liver, or upon a system less disposed  
to take on inflammatory action.

Ardent spirits are a frequent cause of  
it especially in the United States. This







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The morbid influence upon the liver is happily characterized by the fable of Prometheus who is ~~to~~ said to have stolen fire from heaven. This effect is as happily characterized by the punishment of this theft. It was a Vulture preying upon his liver.

In addition to the <sup>causes which act</sup> ~~common~~ <sup>in</sup> common <sup>in</sup> to <sup>in</sup> producing inflammation of the liver and a preternatural secretion of bile, there are several which act more especially in producing the latter. These are great heat, violent exercise, violent emotions and passions of the mind, - the motion of a ship - contusions of the head - ~~and the worms~~ according to Dr. Prout, and the bite of a rattlesnake.







41

The Remedies for this disease are  
palliative and radical.

The palliative remedies are

- 1 Bleeding if the pulse be full or tense.
- 2 Gentle emetics and purges. The former should be used rarely & cautiously. I think I have seen them do mischief in a physician of this city who resorted to them every week or ten days. The purges should be magnesia, Rhubarb, and Calomel & now & then Jalap and Calomel.

3 A Draught of hot water every morning. This is highly commended by Dr Saunders. It meets and blunts the bile by diluting it when it is most acid & most redundant, that is, in the morning. From a small teacupful to half a pint may be taken at a time. The heat of the water gives it a moderately tonic power. —







4 Fasting. This should be as complete as the System can bear, and should be submitted to at least once a week. It is most necessary when the disease has been induced by full feeding. Recollect the practice of Dr Franklin ~~who~~ <sup>while he</sup> ~~was at~~ <sup>minister</sup> ~~at~~ the punch Court. He fasted from all gross food once a week in order to give nature an opportunity to clean out her streets. Recollect too the fact from Redi who tells us he always found the intestines of those Animals that died of hunger not only perfectly clean, but very white.

5 Blisters to the wrists have done great service in this disease especially when it is accompanied with a Diarrhea.  
 11 The radical remedies for this disease

✓ a little Alkali to it, when it is  
agreeable to the Appetite of the  
patient.



should be

1 avoiding all its remote & existing causes particularly intemperance in eating, and drinking.

2 Reduced Diet. The stomach often retains its healthy actions in this disease, or it is under the influence of a putrefactual appetite, and hence the double and evoked labors of the liver. Rice, potatoes & dry bread with a small

quantity of salted meat, or fish & lean fresh meat ~~without~~ should constitute the Diet of patients in this disease. <sup>milk may</sup> ~~with~~ <sup>be made to lay upon the stomach by adding</sup>

3 If the stomach be affected with dyspepsia

all the remedies for it to be mentioned hereafter should be prescribed. The chalybeate waters have often performed great cures of this disease. They strengthen the stomach, & at the same time dilute the bile.

4 Frictions upon the region of the liver, or gently stimulating plasters.

now & then as  
it in whom it appears in a transient,  
~~pathological~~ but most frequently as  
a chronic disease.



5 Colic in such doses as gently to affect the mouth. The disease is generally suspended by this medicine, and when aided by other remedies, generally cured by it.

6 gentle and constant exercise especially on horse back, and

7 a change of climate when there is reason to believe it has been induced by external heat. Travelling should be advised in these cases only to a cool, or cold country.

III. The next disease in order is a preternatural secretion & excretion of a milky fluid from the liver which is discharged from the bowels in the form of a dysentery. It has been called the colicæ flux. It is very common among children in whom it exists with a sound state of the appetite & stomach. It occurs likewise occasionally in adults & *Lancroix*

V Dr Willing has described a diarrhoea  
which ~~was~~ at one season affected a number  
of people in the island of Barbadoes in  
which the stools were ~~very~~ uniform white. +

+ p 75 Rush's edition



## MORBID AFFECTIONS OF THE LIVER.

describes it in the following words. "Excreta albicant, et spumescunt,"\* and again he gives the epithet "Chylosa" to the matter discharged from the bowels.† Degner has taken notice of it in his treatise upon the dysentery. His words are "alii et quidem ante valetudinarii, superata dysenteria, per aliquot adhuc hebdomadas, multum chyli albi qui a pulte farinacea haud abhorrebat, cum fecibus naturalibus mixti, vel post eas, deiciebant."‡ A remarkable case of this disease came under my notice in the summer of the year 1809, in a lady from Wilmington in the Delaware state. She complained of a heaviness in her right side. Her stomach was in a healthy state, and her appetite and digestion were unimpaired. Her stools for many months were nearly as white as milk. ~~Her disease yielded to bleeding, calomel, blisters, and afterwards to astringent medicines.~~ A similar case, attended with pain in the right side and shoulder, occurred in the Pennsylvania Hospital in the months of February and March 1810, an account of which was preserved by Mr. Moore one of the apothecaries of the hospital. I have supposed in both these cases, as well as in all the others that have been mentioned, that the milky discharge came from the liver, and that it was chyle which the liver was unable from its redundancy or some morbid quality inherent in it, to prepare in such a manner as to fit it for being changed into blood.¶ I have called this disease diabetes chylosus in-

\* Opera Physico-Medica and Philologica, p. 188, v. ii.

† P. 190, do. ‡ P. 31.

§ To the authorities mentioned in the author's inquiry into the functions of the liver in support of the chylous nature of the hepatic bile, he will add another which he has lately met with in Verduin's Anatomy. His words are, "We sometimes find a sweet [viz. the hepatic bile] in a manner like the dissolution of saccharum saturni." P. 146. And again, "The bitterness of the bile is never so great, but one may perceive some sweet mixed with it." P. 155. These facts furnish an additional argument in favor of the chylopoetic office of the liver.

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arise from their being more irritated, or  
exercised in discharging the chyle.

*testinalis*. When this redundant or morbid chyle has been discharged by the kidneys it has been called diabetes mellitus, instead of which name, I have given it that of diabetes chylusus *renalis*. The kidneys I believe are not its primary seat. They are, I have supposed, like the bowels, the outlets only of the chyle. I infer this from the emaciation which takes place in this disease, and from the quantity of the matters discharged by the kidneys being so much greater in a given time than the drinks and aliments taken into the body. The former occurs only in diseases of what are called glands of supply, in which the liver is included, and the latter can arise only from the constant drafts of the liver upon the fat and other solid, or component parts of the body. The emaciation of the body may perhaps serve to distinguish this intestinal diabetes from a common intestinal diarrhoea in which there is often no loss of flesh, and according to Dr. Heberden in one instance, an increase of fat. But there are other outlets of this chyle besides the bowels and the kidneys. These are the stomach, the lungs and the salivary glands from which there are several accounts of its having been discharged in the histories of the diabetes. It is true the kidneys sometimes discover marks of disease in patients who die of what has been called the diabetes mellitus; but the same, and much greater marks of disorganization occur in the kidneys in patients who die of general diseases. This curious and important fact in morbid anatomy has been fully established by Dr. Proust in his excellent volumes of dissections entitled "Medicine Eclairée par Observation, et L'Overture des Corps." In a great majority of persons who died of fevers, pulmonary consumption, and other visceral diseases, the kidneys were found in a diseased state. It is possible the recumbent and supine posture of the body before death may be one of the causes of their disorganization. It was in consequence of a belief

✓ Dr Willing has seen  
which was at one place  
of people in the island  
which the stools were

and morbid positions.

+p 75 Rush's edition



= Dr Baillie's remarks upon the state  
 of the kidneys in morbid bodies are  
 worthy of our notice upon this subject.  
 "The kidneys are subject to a good  
 deal of variety in their natural circum-  
 stances from original formation. The  
 two kidneys are sometimes found to  
 be joined together. They are some-  
 times situated before the lumbar  
 vertebrae, & sometimes on the sides  
 of the pelvis. They are occasionally  
 very small in their size, & a kidney  
 on one side is sometimes wanting;  
 when this is the case, the other  
 kidney is larger than the ordinary  
 size." p: 149.

The morbid appearance in  
 the kidneys in this disease probably  
 arise from their being more irritated, or  
 exercised in discharging the chyle.

V He tells us that Steatorrheic Collec-  
 -tions have been found in the livers of  
 persons who have died of the diabetes me-  
 -litis renalis - that the water which is  
 separated from the bile in this disease has  
 a sweet taste, and that the urine in <sup>its</sup> ~~last~~  
 last stage, has the bitter taste of bile. The  
 same opinion I have lately discovered by his  
 Clifton Winttingham, and hence <sup>he has</sup> ~~we~~ placed  
 the diabetes among the diseases of the liver.

He ascribed the disease to what he calls  
 "imperfect assimilation". I concur in  
 this short account of it with my illus-  
 -trious master. It has been objected, &c,  
 because the stomach is <sup>sometimes in</sup> a sound state in  
 some cases, this may be, and yet the  
 liver be in a diseased state & perform its  
 office upon the chyle in an imperfect  
 manner, - when the chyle is not dis-  
 -charged -



that this form of ~~disease~~ Diabetes, affected  
 the liver, and with it the whole system  
~~that~~ with excessive morbid action that  
 I had recourse to depleting remedies for its  
 cure, the effects of which shall be mentioned  
 presently. I was the more disposed to believe  
 the liver to be the primary seat of this disease  
 from discovering the same opinion inci-  
 dentally introduced by Dr Mead in his  
~~It was also likewise by Dr L. Williams.~~  
 account of the poison of the Viper.  
 Now much is ascribed to a morbid state  
 of the stomach in ~~this disease~~ the pro-  
<sup>chylous renal</sup>  
 -duction of Diabetes. There can be no  
 doubt of its performing its office imperfectly  
 in preparing the Chyle in this disease, but  
 I suspect its morbid state is occasioned  
 chiefly by its sympathy with a primary  
 affection of the liver. Dr Cullen has  
 towards the close of ~~this~~ <sup>the</sup> renal

= the bowels or kidneys it is deposited in the Abdomen & =  
= coming Druggs - of the I have seen several cases of

✓ Dr Thomas Christie says it is a very com-  
-mon disease in Ceylon and that it is brought  
on by a diet of ~~Pachasine~~ <sup>Pachasine</sup> vegetables. It is com-  
-mon exclusively to the natives ~~of 7000 Europeans~~ <sup>among</sup>  
who exclusively upon Pachasine vegetables. Of  
7000 Europeans in that Island who live  
upon a mixture of animal & vegetable  
food, the disease is not known.



It is remarkable the Diabetes Myelaeus  
intestinalis, & renalis are both attended  
 with the same symptoms. They both  
 sometimes exist together.

They are both moreover produced  
 by the same causes, and these are  
 1 all the usual causes of Hepatitis &  
 Hepaticula.

2 all the usual <sup>causes of</sup> Gout, particularly  
 intemperance in the use of fermented &  
 ulent liquors - of acids - and aulent liquors,  
 and the undue exercise of all the faculties  
 of the mind. -

3 A Diet consisting exclusively or chiefly  
 of vegetables. Cows and horses are some-  
 times affected with this disease and  
 probably from this cause living  
 wholly upon vegetables.

The symptoms of the Diabetes  
 this makes in a





Chylous renalis are a frequent, quick  
 full, or tense pulse, - great thirst - fla-  
 -tency - a hot and dry skin. There is  
 one exception to the last symptom I have  
 mentioned upon record, and that is  
 profuse yellow sweats from the groin  
 - a burning sensation in the hands  
 and soles of the feet, - pains in the head,  
 & back - ball of the great toe, - pubis &  
 left side - giddiness, and disturbed sleep,  
 a dry mouth, a red tongue, palpita-  
 -tion of the heart, <sup>yellowness of the eyes & skin, or a</sup> vertigo, & diarr-  
 -hoea with white, green & dark coloured  
 stools, inordinate Appetite, dulness of  
 the senses, sore gums - great emaciation  
 of body, ~~phagor~~ dysuria, phymosis,  
~~stomatitis~~

this makes up a series





involuntary emission of semen - retraction of the testicles, and absence of sexual desires. - The following particulars in the history of the discharge <sup>of appearance</sup> of the Urine should command our attention.

- 1 It is unusually copious, exceeding the quantity of liquids taken into the body.
- 2 The quantity of Urine is sometimes less copious than usual by  $\frac{1}{5}$ . This is taken notice of by Dr Latham.
- 3 It is discharged in large and in small quantities at a time.
- 4 It sometimes passes out of the bladder in an involuntary manner.
- 5 The Urine is at first watery, then white and turbid. It is homogeneous generally, but I have seen one case in which ~~separated~~ the white or chylous matter this makes in a

+ in Mr Sutherland

v more slowly than healthy birds.



separated from the watery part of the Urine, and settled in the bottom of the Vessel that contained it. Dr. Baillie describes a similar case in which the white or Chylous matter was deposited in the form of Cream.

6 The Urine after a while acquires a sweet taste, and yields from  $\frac{1}{2}$  in a pint to  $\frac{1}{6}$  of sugar. The Urine thus impregnated with sugar undergoes the vinous fermentation. It has been found to contain no Urea. When lime

or an alkali is thrown upon it it emits an ammoniacal Vapour. After a while the Urine loses its sweet, and acquires a bitter taste. It putrefies.

But the kidneys & bowels are not the only outlets of the Chyle which floats in the blood. — It is discharged from the mouth this way in a

✓ from the stomach in Catarrhes  
 Sputatoria - or water brash, and  
 from the pores, in Eruptions. The sweat  
 upon the skin emit after a while an  
 Acid odor, from this having undergone  
 the acutous fermentations. From these  
 facts you see the Disease so far from being  
 local, or confined to the kidneys, pervades the  
 whole system. †  
~~I have seen one case in which~~

~~The Chyle separated from the Urine,  
 and settled in the bottom of the  
 vessel that contained it. This patient was cured. -  
 Dr Baillie  
 describes a similar case in a woman.  
 The sediment in this ~~case~~ instance  
 he says resembled cream.~~

† Even the breath has a smoky  
 smell said to resemble <sup>and smells</sup> ~~very~~ <sup>very</sup> ~~strong~~ <sup>strong</sup>. - It  
 would seem as if the kidneys were the  
 high road only, and all the other outlets  
 I have mentioned, the footpaths by which



24 insaliva - from 53 the lungs by coughing ~~the~~ ✓

~~Dysuria, phlogosis - in vas deferens, flow  
of Urine, Absence of seminal emission - retraction of the testicles,  
a yellowness of the eyes & skin - Sweetish  
or acid breath, taste and sweats. The matter  
which imparts the sweet taste to the tongue  
is not only secreted in the mouth, but poured  
upon it from the stomach and lungs.  
The Urine is at first pale, and insipid,  
becomes gradually turbid, then sweetish,  
afterwards bitter and finally small in  
quantity. ~~the~~ It putrefies slower  
than healthy Urine, becomes acid by  
fermentation, and when lime or an  
alkali is added to it, an ammoniacal  
Vapor rises from it. ~~the~~ <sup>the</sup> ~~the~~  
Thirty six ounces of the Urine in the  
the active stage of the disease yielded 314  
of Saccharine matter in one experiment,  
and a pint of it yielded an ounce of  
this matter in a second.~~

the Chyle is conveyed out of the  
body.

It is no objection to this amount of the  
sugar I have delivered that we see no  
~~kidneys & bowels~~ <sup>when drawn in this</sup>  
marks of Chyle in the blood, ~~and~~ <sup>are unable to detect any sugar in it.</sup>  
of ~~excretion~~ <sup>excretion</sup> but we ~~not preserve it~~ <sup>we preserve it</sup> ~~in the~~  
~~of ~~the~~~~ The same thing takes place in  
the blood of women who give suck, and  
yet we believe the milk in their breasts to  
be a secretion from the Chyle of this  
blood. — No Urea <sup>is</sup> found in the blood when drawn  
from a Vein, and yet its component parts ~~are not~~  
~~exist there, or we should not find them in the blood.~~  
Criminal food in a quantity so <sup>Urine.</sup>  
The sugar is the offspring of secretion.

Small as ~~it is~~ and so prepared,

as to afford as little stimulus  
as possible, inimal food is indicated  
not only by the flatulency <sup>and</sup> ~~occasional~~  
Acidity, which <sup>sometimes</sup> occur in the stomach, but  
by its being more easily assimilated,  
or converted into perfect Chyle and  
blood. — It was used Dr. Christie says by  
an animal diet in the natives of Ceylon.



This disease sometimes destroys life in a few weeks, but it often continues for months and even and then for years before it proves fatal. Aphae, delirium, & convulsions sometimes precede and attend its last stage. —

The Remedies for the Diabetes Chylous intestinalis should be

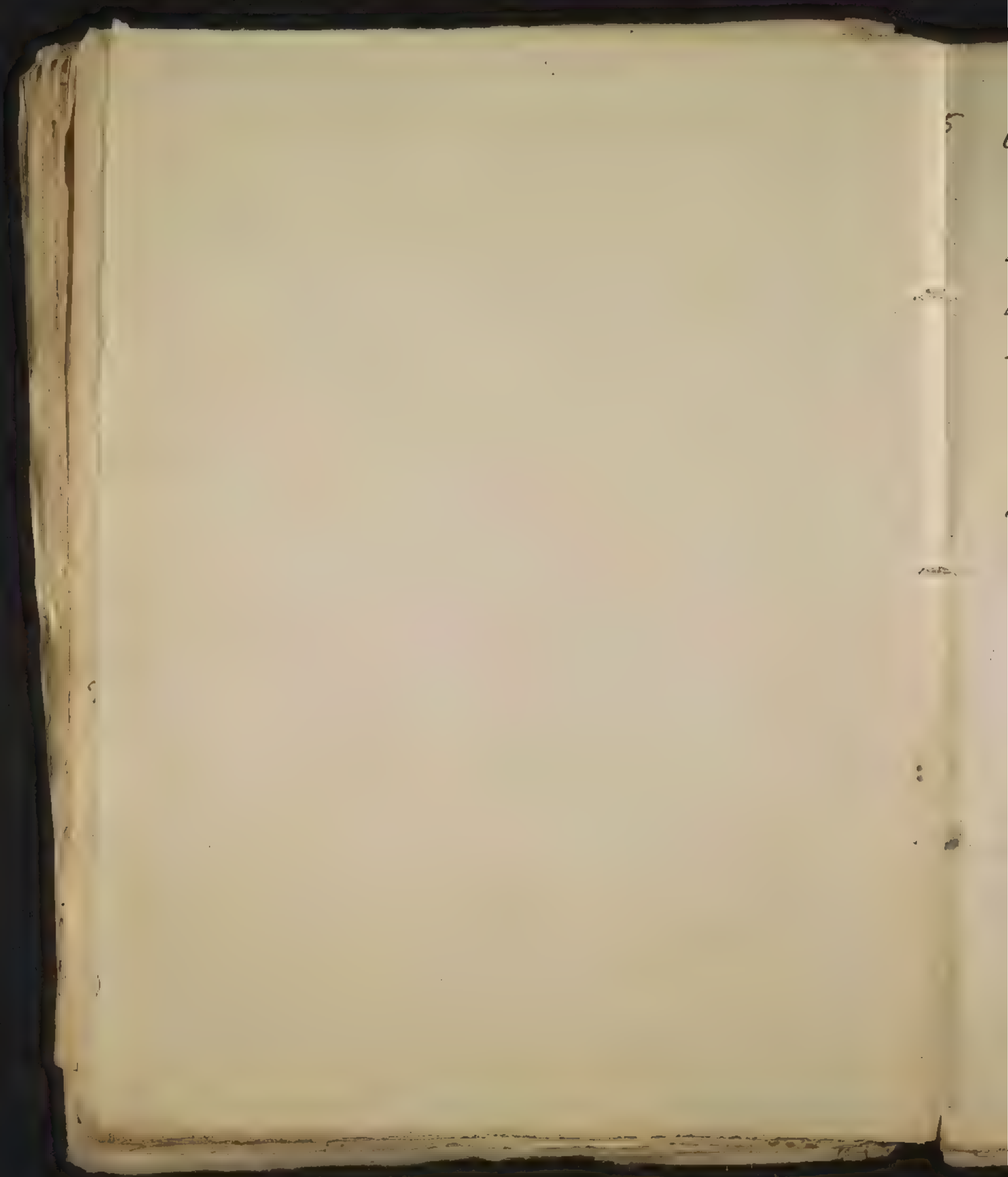
1 Bleeding if the pulse be full or tense. — The efficacy of this remedy in the Diabetes which follows the measles, and in several other cases of Diabetes strongly urges its use in this disease.

2 purges of magnesia, Rhubarb and Calomel.

3 Emetics of Ipecacuanha

4 A ~~reduced~~ reduced diet, consisting of V

5 A Laxation, this remedy promises more help than any other from the seat of the disease being in the liver.





5 6 After the reduction of the pulse, Astringents and tonics such as are commonly prescribed in diarrhoea from other causes and which will be mentioned hereafter.

~~There are two types~~  
The Remedies for the Diabetes chylosus urialis, should be  
 1. Blinding if the pulse call for it which it always does in its first stage. I have used this remedy with great advantage in several cases of this disease. The blood is general indicates the usual marks of great morbid action. You will find it did so in the case mentioned by Dr. Rolton ~~but~~ as the blood drawn by it it is true was not very, but it exhibited much stronger marks of excessive action in the blood vessels.

✓ In those cases in which there  
is reason to believe the disease has  
been induced by ~~excess~~ vegetable ali-  
-ment, the diet should consist nearly  
<sup>altogether</sup> of Animal food, particularly  
Beef & Mutton. Dr Thomas Christie says  
it was cured by an Animal Diet in the  
Maladies of Ceylon.



2 Purges, 3 Simultaneous <sup>animal</sup> reduced ~~to~~ <sup>as soon as</sup>  
 Diet, and ~~to~~ <sup>to</sup> latrination. As soon as  
 they have reached the system to the  
 stimulating point, the remedies  
 should be Alum, Citric Acid - bark  
 iron, opium, oil of amber, tar &  
 garlic, to which should be added  
 exercise, the cold bath, & ~~also~~ <sup>also</sup> tra-  
 -veling. 6 It has been cured by a profuse  
 perspiration brought on by labor.

There are two very troublesome  
 symptoms in this disease which re-  
 -quire specific remedies. They are an  
 inordinate appetite & great thirst.  
 The former may be blunted by means  
 of a table spoonful of sweet oil taken  
 three or four times a day, and by chew-  
 -ing tobacco - The latter should be allayed  
 by ~~means of~~ <sup>by</sup> sucking lemons - by wash-  
 -ing the mouth with cold water, or  
 holding ice in it, or by taking a little





6

with & water. Thirst we are told is  
 very common among the Catholics in  
 Ireland at the season of lent in which  
 they live wholly upon salt fish. They  
 alleviate it by drinking a mixture  
 of Oatmeal and water. They call  
 it Shirrk. The raw Oatmeal proba-  
 -bly from its indigestible nature  
 excites an action from the stomach  
 which opens or destroys the morbid  
 excitement of thirst in the fauces.

~~I shall say presently that it~~

where





## MORBID AFFECTIONS OF THE LIVER.

that this form of diabetes affected the liver, and with it the whole system, with excessive morbid action in its first stage, that I had recourse to depleting remedies for its cure, and happily with success in four instances out of five that have come under my notice. I was the more disposed to believe the liver to be the primary seat of this disease from discovering the same opinion incidentally introduced by Dr. Mead into his account of the poison of the Viper.\* I know much is ascribed to a morbid state of the stomach in the production of diabetes. There can be no doubt of its performing its office imperfectly in preparing the chyle, in this disease, but I suspect its morbid state is occasioned chiefly by its sympathy with a primary affection of the liver. ~~DE~~

IV There is a preternatural secretion from the liver of a clear liquor, and nearly as insipid as water. Of this I have met with a remarkable instance. Benjamin Fuller, formerly a respectable merchant of this city, was afflicted for many years with a distressing colic, which was followed by a profuse discharge of water from his stomach. He died on the twenty-ninth of November, 1799, and agreeably to his request before his death, his body was opened by Dr. Dorsey in the presence of Dr. Physick and myself. We found nothing morbid in the structure of the liver, except a small diminution of its size. In the gall-bladder we found four gall-stones, two of which were highly polished by their friction upon each other, together with about half a gill of exactly the same kind of clear and watery fluid which he had been in the habit of discharging in quarts at a time from his stomach. This dissection served as a clue to lead me to the source of those copious discharges of water from the bowels which take

\* M. 40, 41.

from the bowels —  
from the liver. —

visited  
whose  
were  
stained  
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up it  
active  
turbid.  
— on the  
— 1811  
with  
water  
void

## RUSH'S REMARKS ON

place in certain diseases. Piso has described them in his account of the "Diarrhœa Serosa." Dr. Willis takes notice of them under the name of "watery stools," in his description of the fluxes which prevailed in London in the year 1670; and sir John Pringle mentions them in his history of the Dysentery. Morgagni speaks of them as occurring chiefly in the autumn, a time when the liver is more liable to be affected with disease, than any other part of the body. He appears to have suffered from them himself. In travelling with great haste to visit Cardinal Albano in the year 1733, he tells us he discharged at least sixteen pints of almost limpid water, in the course of twelve hours.\* Nor should it surprise us that the liver should thus suddenly pour this immense quantity of water into the bowels. In these cases the water appears to have lost its ordinary course, for the liver more commonly empties its watery plethora into the cavity of the abdomen, where it produces the disease known by the name of the ascites. If this opinion be correct, may not the diabetes aquosus be considered as an ascites thrown upon the kidneys? This conjecture is rendered probable by a preternatural flow of urine so often occurring in hard drinkers, and hard drinkers being so often affected with diseased livers.

renalis

There is I believe, a preternatural secretion and excretion of air from the liver. A secretion of air has been admitted by Mr. John Hunter from other parts of the body. A discharge of air from the uterus has been mentioned by Sauvage. Two instances of it have been noticed in this city; but the liver seems to be the most frequent and plentiful source of it. The dry colera morbus of the year 1679, described by Dr. Sydenham, in which torrents of air were dis-

\* Letter 31st. Article 9th.



in his account  
notice of them  
scription of the  
1670; and sir  
the Dysentery.  
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be affected with  
appears to have  
with great haste to  
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us that the liver  
quantity of water  
appears to have lost  
commonly empty its  
abdomen, where it  
of the ascites. If this  
aquosus be consi-  
neys? This con-  
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of the body. A dis-  
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noticed in this city;  
frequent and plentiful  
of the year 1679, de-  
currents of air were dis-

✓ In the Summer of 1811. I visited  
a lady in the Colera morbus whose  
evacuations from the bowels were  
so limpid, that they hardly stained  
linen. They flowed from her in an  
involuntary manner. Perhaps it  
would be proper to call this hepatic  
disease diabetes aquosus intestinalis.

The fever which prevailed in the  
border of New York & Connecticut in 1811  
described by Dr. Bapet was attended with  
similar involuntary discharges of water  
from the bowels - probably derived  
from the liver. —

27  
✓ form of diabetes was in a school  
mate when a boy in whom I well  
recollect it followed an intermitting  
fever - a disease which is universally  
admitted to impair the natural  
functions of the liver. -



For my part I have no doubt of this  
 often ~~being the case~~ <sup>taking place</sup>. The disease in this  
 case should be called Diabetes agnosus  
venalis. One of the worst cases of this

The Remedies for the Diabetes agnosus  
intestinalis should be liquid Laudanum,  
 Opials, and astringents both by the mouth,  
 and by injections, and <sup>external</sup> warm applications  
 to the bowels.

The Remedies for the Diabetes agnosus ve-  
nalis should be  
 1. Depletion when the pulse is preternaturally  
 excited, afterwards Bark, Iron, Alum and  
 all the other <sup>common</sup> tonic and Astringent Articles  
 of the Shops.

While I thus maintain that the  
 Diabetes agnosus venalis is often the effect  
 of an original disease in the liver, I beg  
 leave to add that I have no doubt of

✓ Discharge of Water in A purraining of  
Hydrotica, and in Hypochondriasis is  
the effect of a transient or chronic  
disease in the kidneys.

✓ The dry Colera morbus of the year  
1679 described by D Sydenham in which  
torments of air were discharged upwards  
and downwards instead of bile, seem  
to have been derived exclusively from  
the liver. —

+ Dr Dancer of Jamaica

# Mr Page.



its being occasionally a local disease, & ~~brings~~ the effect wholly of a diseased state of the kidneys. — The prostate<sup>v</sup>

There is a supernatural secretion<sup>and</sup> of air from the liver. This is no new opinion. Mr John Hunter admits of the secretion and excretion of air from many parts of the body. Sauvage mentions a discharge of air from the uterus. Two instances of it have occurred in this city; but the liver seems to be the most frequent and plentiful source of it. I have seen two cases of it lately, the one in 1810 — the other in 1811. In the former<sup>+</sup> it preceded a constant discharge of bile, — in the latter it<sup>+</sup> preceded a copious discharge of bile. — It was in both cases a distilling disease. The air was discharged both

V we have ~~seen~~ <sup>said</sup> ~~the~~ <sup>ascribed</sup> the Dry colic  
to Air ~~into the cavity of which~~ <sup>as a secret</sup> in  
the liver ~~are some times thrown into~~ <sup>and poured</sup>  
the cavity of the Abdomen as well as  
into the intestines. May not the  
Tymparites, or air dropsy be the  
effect of in like manner of a  
discovered Action in the liver. The  
Air in this disease is <sup>more permanently</sup> ~~poured into~~  
~~confined in~~ <sup>only into</sup> the cavity of the Abdomen  
~~but into~~ the intestines, where by stay-  
ing it produces <sup>pain and</sup> external swelling.  
It is sometimes <sup>contained in the</sup> ~~not easily distinguished from~~  
~~the swelling which attends air in the~~  
cavity of the Abdomen, & now & then combi-  
ned ~~there~~ <sup>with water</sup>.

The Remedies are Lardum, Lardals  
and tonics. I have read of an Account of  
its having been cured by bleeding, and  
by cold applications to the bowels. This  
would indicate that it was sometimes  
=



upwards and downwards. The noise made by its coming upwards has been called by the common people "Dry boking" - It I have often ~~seen~~ observed it, and ~~once felt it~~ in the yellow fever. It is a substitute for the discharge of bile. It is remarkable they never take place together. It would seem, that they depended upon two distinct kinds of action in the liver.

The Remedies for this Dry Colera should be blinding if the pulse call for it - ~~and~~ afterwards Cordials, liquid Laudanum and warm external applications to the bowels. I have known two instances in which ~~the disease~~ it was relieved by taking occasionally a teaspoonful of Camphorated Spirit of Wine in a little Sugar & water. —

✓

7  
= Attended with preternatural or exupine  
excitement. D<sup>r</sup> Renaudin <sup>Distinguished</sup> ~~describes~~ it from  
ascites by being accompanied with "a more  
frequent, and hard pulse."



The last morbid Affection or Disease  
 of the liver which I mentioned was a  
 discolouration & excretion of black  
 matter from it. It has been supposed to  
 be blood, but it does not coagulate like  
 blood. It is however sometimes mixed  
 with blood. It appears to be ~~black~~ bile  
 of a morbid quality. It is sometimes  
 discharged upwards <sup>in the yellow fever</sup> in which case it  
 has been supposed to come from the  
 stomach, but it more generally passes  
 downwards, and that too in immense  
 quantities. ~~I have said~~ It is <sup>generally</sup> ~~not~~  
 a fatal symptom in ~~few~~ Antimonial  
 fevers & Dysenteries. I lost three patients  
 with it in the Antimony of 1810. I have  
 called it from its ~~real~~ appearance &  
 fatal issue the black vomit of the liver.

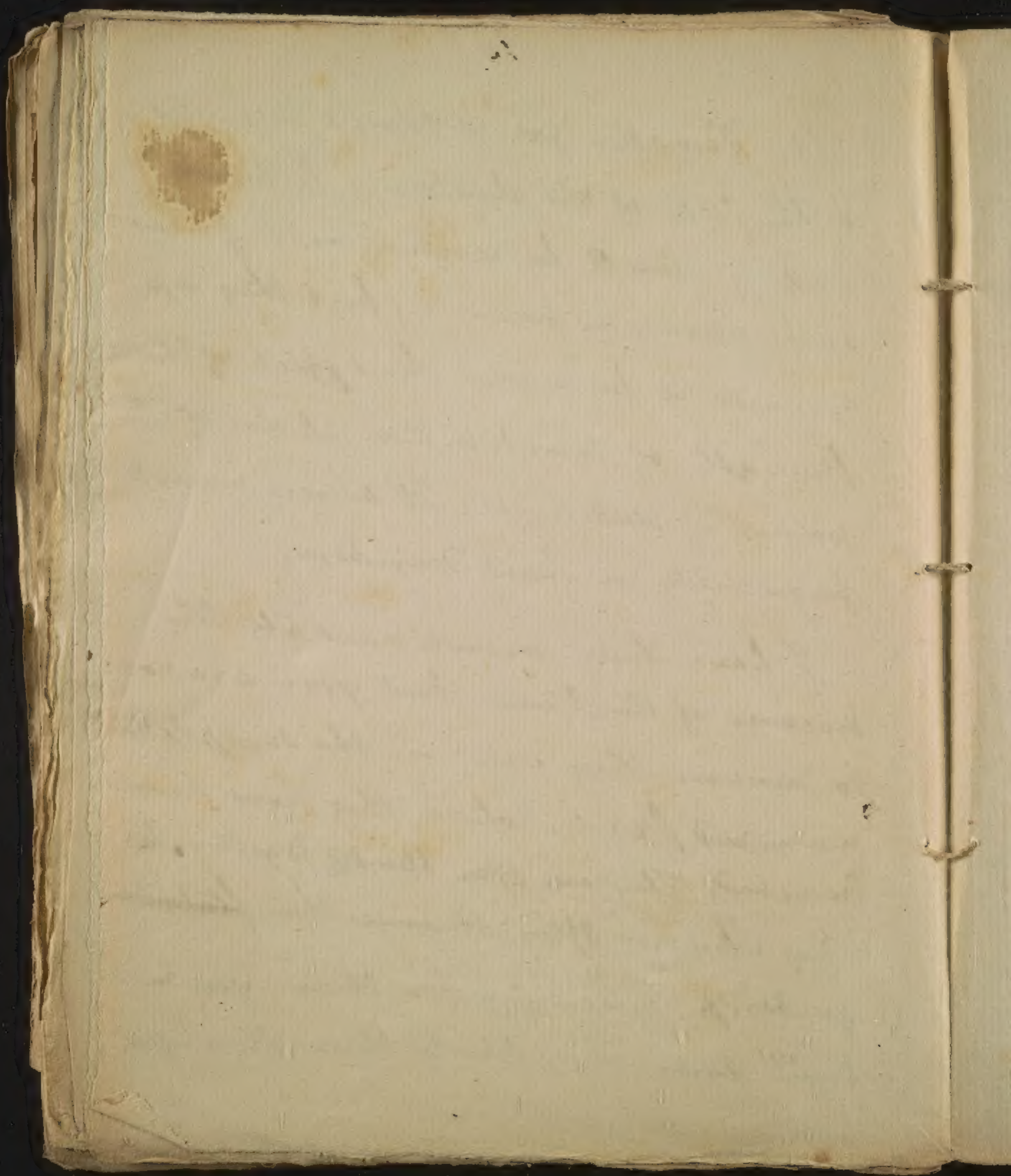




The Remedies for it should be suited to the state of the System. Perhaps bleeding would be useful in it. I have seen recoveries from it, but they appeared to be more the effect of the strength of Constitution than of the power of Medicine. It occurs most frequently in hard drinkers.

I have thus mentioned all the Diseases of the liver, but you are not to suppose they exist in the simple & unmixed state in which they have been described. They are often blended together. They moreover often change their ~~state~~ grades. In prescribing for them you must suit your remedies to those changes.







by.

we proceed next to speak of the disorders  
of the liver, that is of those morbid  
affections in which diseased action <sup>exists</sup>,  
from a decay or destruction of irritability  
~~or loss of force~~ in the parts affected.

They are often the effects of <sup>wasted</sup> ~~excessive~~ ~~action~~  
excitability, and the consequences of dis-  
ease, but they are sometimes primary  
affections of the liver, and occur <sup>as</sup> ~~both~~  
~~so~~ well as exist without any  
of the usual signs of disease.

The first disorder that I shall <sup>mention</sup> ~~name~~  
consists in a total obstruction of secre-  
tion and ~~&~~ excretion from the liver.

Its causes are,

1 All the causes that induce yellow  
fever and hepatitis. It is generally



